

# Document made available under the Patent Cooperation Treaty (PCT)

International application number: PCT/US2005/040876

International filing date: 10 November 2005 (10.11.2005)

Document type: Certified copy of priority document

Document details: Country/Office: US  
Number: 60/626,570  
Filing date: 10 November 2004 (10.11.2004)

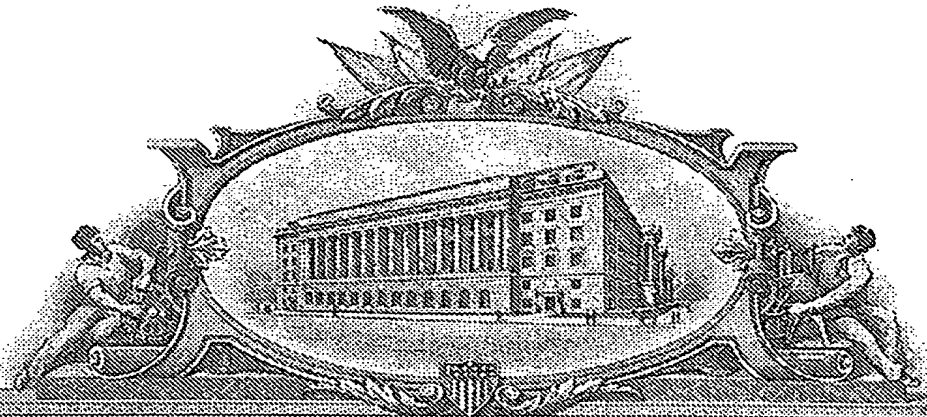
Date of receipt at the International Bureau: 02 February 2006 (02.02.2006)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)



World Intellectual Property Organization (WIPO) - Geneva, Switzerland  
Organisation Mondiale de la Propriété Intellectuelle (OMPI) - Genève, Suisse

1419532



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

*January 26, 2006*

**THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE.**

**APPLICATION NUMBER: 60/626,570**

**FILING DATE: *November 10, 2004***

**RELATED PCT APPLICATION NUMBER: *PCT/US05/40876***

**THE COUNTRY CODE AND NUMBER OF YOUR PRIORITY APPLICATION, TO BE USED FOR FILING ABROAD UNDER THE PARIS CONVENTION, IS *US60/626,570***



Certified by

Under Secretary of Commerce  
for Intellectual Property  
and Director of the United States  
Patent and Trademark Office

111004

17589 U.S. PTO

PTO/SB/16 (09-04)

Approved for use through 07/31/2008. OMB 0851-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**PROVISIONAL APPLICATION FOR PATENT COVER SHEET**

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

Express Mail Label No. EV 453030946 US

U.S. PTO  
607626570

111004

INVENTOR(S)		
Given Name (first and middle (if any))	Family Name or Surname	Residence (City and either State or Foreign Country)
Michael F.	Greene	Amherst, NH
William J.	Delaney	Bedford, NH
Additional inventors are being named on the <u>1</u> separately numbered sheets attached hereto		
TITLE OF THE INVENTION (500 characters max):		
Device Including Sensors For Establishing Communications Interoperability At An Incident Site		
Direct all correspondence to: CORRESPONDENCE ADDRESS		
<input checked="" type="checkbox"/> The address corresponding to Customer Number: <u>22500</u>		
OR		
<input type="checkbox"/> Firm or Individual Name		
Address		
City	State	Zip
Country	Telephone	Fax
ENCLOSED APPLICATION PARTS (check all that apply)		
<input checked="" type="checkbox"/> Specification Number of Pages <u>5</u>		
<input type="checkbox"/> CD(s), Number of CDs _____		
<input type="checkbox"/> Drawing(s) Number of Sheets _____		
<input type="checkbox"/> Other (specify) _____		
<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76		
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT		
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.		
<input type="checkbox"/> A check or money order is enclosed to cover the filing fees.		
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.		
<input checked="" type="checkbox"/> The Director is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: <u>190130</u>		
A duplicative copy of this form is enclosed for fee processing.		
<input checked="" type="checkbox"/> The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government. No.		
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____		

SIGNATURE



Date

11/9/04

TYPED or PRINTED NAME

Daniel J. LongREGISTRATION NO. 29,404

(if appropriate)

Docket Number: 20040137 PROTELEPHONE 603-885-2643**USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT**

This collection of information is required by 37 CFR 1.51. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**PROVISIONAL APPLICATION COVER SHEET**  
**Additional Page**

PTO/SB/18 (09-04)

Approved for use through 07/31/2008. OMB 0851-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>First Named Inventor</b>	Michael F. Greene	<b>Docket Number</b> 20040137 PRO
<b>INVENTOR(S)/APPLICANT(S)</b>		
Given Name (first and middle (if any))	Family or Surname	Residence (City and either State or Foreign Country)
William E. Mihir D.	Tonseth Boal	Hudson, NH Nashua, NH

Number   2   of   2  

**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

EXPRESS MAIL CERTIFICATE EV453030946US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Greene, et al.

Filed: Herein

Atty. Dkt. No: 20040137 PRO

For: Device Including Sensors For Establishing Communications Interoperability At An Incident Site

CERTIFICATE OF MAILING 37 CFR 1.10: I certify that this correspondence is being deposited on the below date with the U.S. Postal Service with sufficient postage as EXPRESS MAIL addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

Date:

11-10-84

*Gloria Abbasciano*

Gloria Abbasciano

Dear Honorable Commissioner:

LETTER OF TRANSMITTAL

Submitted herewith is a Provisional Patent Application consisting of 5 pages of cover sheet, specification and claims.

[ ] Invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

DEPOSIT ACCOUNT 190130 AUTHORIZATION – The Office is hereby authorized to charge the required fee, and any deficiency or credit any overpayment in the fees to the above deposit account, owned by BAE SYSTEMS Information and Electronic Systems Integration Inc.

Respectfully submitted,

*Daniel J. Long*

Daniel J. Long, Reg. No. 29,404

USPTO Customer No. 22500  
BAE Systems  
PO Box 868, NHQ01-719  
Nashua, NH 03061-0868  
Tel 603.885.2643  
Fax 603.885.2167

**DEVICE INCLUDING SENSORS FOR ESTABLISHING  
COMMUNICATIONS INTEROPERABILITY AT AN INCIDENT SITE**

**Cross Reference to Related Applications**

This application is related to U.S. Patent Applications Serial No. 10/943,323, filed September 17, 2004 and Serial No. 60/575,774, filed May 28, 2004, the contents of both of which are incorporated herein by reference.

**Background of the Invention**

**1. Field of the Invention.**

The present invention relates to mobile communications and more particularly to an ad hoc module for establishing a temporary incident area network at a local scene of an incident for communication interoperability compatible with and through the responder's everyday standard issued communication units.

**2. Brief Description of Prior Developments**

The above-referenced U.S. Patent Application Serial No. 10/943,232 discloses an ad hoc emergency interoperability communication network which is established by providing universal temporary incident area network modules that communicate with each other on a network, with the network being established when vehicles containing the temporary incident area network modules within range of each other. The temporary incident area network modules are such as to have an RF or other connection with handheld or in-vehicle communications devices of whatever variety, but which have standardized voice, data and push-to-talk channels. The system thus allows communications amongst the responders to an incident without having to set up

prearranged protocols, equipment compatibilities, or equipment addressing. Moreover, command and control structure can be achieved through a commander having access through his own temporary incident area network module to be able to route and control the flow of information of the net. Portable temporary incident area network modules may be provided to provide range extension capabilities, for instance, for handheld modules that communicate with the temporary incident area network modules, which have a self-contained battery. Moreover, in one embodiment, switches are provided on the communications equipment for the individual to be able to have the communications equipment switched between the ad hoc temporary incident area network and the closed network of the department for whom the individual works.

In addition to the need for communications interoperability there is also a need for sensors at incident scenes. A variety of sensor devices are being utilized at incident scenes. Such devices include chemical and biological sensors, cameras and personal biological sensors.

Currently the information available to one department at an incident scene is only available to other departments if such departments talk to each other. Because communications interoperability problems may exist, it is not always possible for departments to talk with each other by means of the communications devices being utilized by first responders.

A need, therefore, exists for an efficient way to provide sensor data at an incident scene.

### Summary of Invention

According to the method and apparatus of this invention, sensors are incorporated into the network described in U.S. Patent Application Serial No. 10/943,323. Resulting sensor data can be transmitted and shared with all the departments connected to this network including notification of hazardous situations and a first responder in jeopardy.

### Detailed Description of the Preferred Embodiment

The sensors themselves already exist and are in use at crisis scenes. This invention adds a wireless transmitter/ receiver to these devices that is compatible with the wireless network described in U.S. Patent Application Serial No. 10/943,232. This addition makes the sensor data and video data available to all responders at the incident scene. Each responder wanting to display or view the sensor data/ video will be equipped with a compatible transmitter/ receiver in addition to an appropriate display device such as a computer, computer notebook, PDA or similar device.

While the present invention has been described in connection with the preferred embodiments of the various figures, it is to be understood that other similar embodiments may be used or modifications and additions may be made to the described embodiment for performing the same function of the present invention without deviating therefrom. Therefore, the present invention should not be limited to any single embodiment, but rather construed in breadth and scope in accordance with the recitation of the appended claims.



Claims

What is claimed is:

1. A system for aiding first responders to an incident to intercommunicate regardless of the type of communications devices used by the first responders, comprising:

a temporary incident area network module for one or more of said communications devices, said module converting the frequencies and protocols of the communications devices coupled thereto to a universal frequency and protocol and establishing wireless communication between said universal modules using said universal frequency and protocol, one of said modules setting up an ad hoc temporary incident area network at said incident, such that when additional modules arrive at the incident, said ad hoc temporary incident area network permits interoperability between communications devices used by the first responders arriving at the incident; and

at least one chemical or biological sensor or camera connected to the network by means of wireless transmitter/receiver, whereby data from said sensor is available to all said first responders.

Abstract

A system for aiding first responders to an incident to intercommunicate regardless of the type of communications devices used by the first responders. A temporary incident area network includes a module for one or more of said communications devices. There is also a module which converts the frequencies and protocols of the communications devices coupled thereto to a universal frequency and protocol and establishes wireless communication between said universal modules using said universal frequency and protocol. One of the modules sets up an ad hoc temporary incident area network at the incident, such that when additional modules arrive at the incident, the ad hoc temporary incident area network permits interoperability between communications devices used by the first responders arriving at the incidents. There is also at least one chemical or biological sensor or camera connected to the network by means of wireless transmitter/receiver, whereby data from said sensor is available to all said first responders.